**Camilla Callegari**
**Ivano Caselli**
**Marta Ielmini**
**Simone Vender**

Department of Clinical
and Experimental Medicine,
Section of Psychiatry,
University of Insubria, Varese, Italy

# INFLUENCE OF THE RECOVERY STYLE FROM PSYCHOSIS ON THE DISTRESS IN PSYCHIATRIC PROFESSIONALS: AN OBSERVATIONAL STUDY FOCUSED ON DEPRESSION OF PSYCHOTIC PATIENTS IN A DAY CENTER

**Abstract**

**Objectives:** This study aims to analyze the relationship between symptoms – focusing on depression – and the recovery style in a psychiatric day center. Assuming that this relationship affects the burden management, the study has the additional endpoint of evaluate the impact of the interaction between symptoms and recovery style on the distress of the mental health professionals.

**Materials and Methods:** 45 patients enrolled have been evaluated by the Neuropsychiatric Inventory (NPI - Italian version) and Integration/Sealing Over Scale (ISOS - Italian version), within three months (March-June 2014).

**Results:** In the sample a statistically significant relationship between integration, depression and nervousness was observed ($p < .001$ and $< .003$). The symptoms which cause a greater distress in the health workers are uninhibition, nervoussess and apathy. Moreover, the results indicate that depression and anxiety cause a greater degree of distress in sealer patients.

**Conclusions:** Uninhibition, nervousness and apathy were more burdensome for mental health professionals, because they require a greater engagement in the therapeutic relationship. There are some limits: the small size of the sample and the lack of an evaluation of insight, closely related to the construct of recovery style. We are engaged in research to deepen this point, with these goals in mind.

**Key words:** rehabilitation, recovery style, integration, sealing over, distress

## Introduction

In psychiatric rehabilitation, the Day Center is the structure of the Department of Mental Health in which therapeutic/rehabilitation programs and re-socialization activities take place. In this semi-residential setting, the severity is the high presence of the symptoms. The burden is the degree of distress reported by the health professionals in the management of psychotic patients.

McGlashan et al. identified two main recovery styles: “sealing over” in which the subject minimizes and tends to remove the recent psychotic episode, and “integration”, in which there is a continuity between psychotic and pre/post-psychotic experiences [1].

Tait et al. studied how insight, psychotic symptoms and recovery

**Correspondence**

Camilla Callegari
camilla.callegari@uninsubria.it

style may predict patient's involvement with psychiatric services, recognizing that the tendency to sealing over is associated with a lower service engagement than integration. The same authors recognized as the sealers have attachment difficulties to caregivers [2].

The primary aim of this study is to analyze the relationship between symptoms – focusing on depression – and the recovery style. Secondary, assuming that this relationship affects the burden management, the study has the additional endpoint of evaluate the impact of the interaction between symptoms and recovery style on the distress of the mental health professionals.

## Materials and Methods

This study assesses a total of 45 patients in a psychiatric day center, suffering from psychotic disorders and recruited from March to June 2014. Patients had to fulfill the following inclusion criteria: suffer from psychotic disorders (Schizophrenia, Schizoaffective Disorder, Delusional Disorder, according to the criteria of ICD-10); attend the center for at least one year; with a frequency of at least twice a week; sign an informed consent for the participation [3].

The different psychopathological expressions and the degree of distress reported by the health workers were assessed through the Neuropsychiatric Inventory (NPI), semi-structured interview based on twelve questions that enables to evaluate each symptom presented by the patient through the frequency and severity. The recovery style was assessed through Integration/Sealing Over Scale (ISOS). This scale a semi-structured interview administered to caregivers, consisting of 13 items. Each one is expressed by two antithetical hypothesis that respectively refer to integration and sealing over style. This instrument have already been validated and previously used by our working group also within the semi-residential setting [4-7].

### *Statistical analysis*

All collected variables were described by mean and standard deviation or absolute frequencies and percentages, respectively for continuous and categorical variables. The Chi-square test (for categorical variables) and T tests for independent samples, or the corresponding non-parametric Wilcoxon (for continuous variables) were used to compare the two groups. All test were considered significant at 0.05 alpha level. The data were analyzed using SAS (Statistical Analysis Software) version 9.4.

**Table I.** Socio-demographical and clinical characteristics of the sample.

| | Integration | Sealing Over | Test* | p-value |
|---|---|---|---|---|
| N | 23 | 22 | - | - |
| Age - mean (SD) | 51.6 (7.3) | 50.2 (9.3) | 0.56 | 0.58 |
| Sex - male (%) | 13 (56.5) | 12 (54.6) | 0.01 | 0.89 |
| Education attained - high school/graduate (%) | 7 (30.4) | 7 (31.1) | 0.01 | 0.89 |
| Family caregiving - Yes(%) | 13 (56.5) | 16 (72.7) | 1.29 | 0.26 |
| Marital Status - Ever married (%) | 8(34.8) | 4(18.2) | 1.58 | 0.21 |
| Medical History** - Positive (%) | 11 (47.8) | 8 (36.4) | 0.61 | 0.44 |
| Year frequency - Median§ | 3 | 3 | 1.38 | 0.16 |
| Weekly frequency - Median§ | 5 | 5 | -0.63 | 0.52 |
| Invalidity - complete (%) | 15 (65.2) | 15 (68.2) | 0.04 | 0.83 |
| Tutor - Yes (%) | 2 (8.7) | 4 (18.2) | 0.87 | 0.35 |
| *Activity - ≥ 4(%)* | 21 (91.3) | 19 (86.4) | 0.28 | 0.60 |
| Use of antipsychotics - % | 19 (82.6) | 17 (77.3) | 0.20 | 0.65 |
| Use of antidepressants - % | 7 (30.4) | 4 (18.2) | 0.91 | 0.34 |
| Use of anxiolytics or hypnotics - % | 10 (43.5) | 16 (72.7) | 3.94 | 0.04 |
| Use of Depot - % | 2 (8.7) | 4(18.2) | 0.88 | 0.35 |
| Health worker tenure -Median | 14 | 14 | -0.42 | 0.67 |

** Chi-square (1 df) for qualitative features, t-test (43 df) or Wilcoxon for quantitative features. ** Positive Medical History. § Wilcoxon test was applied due to non-normality distribution.*

## Results

### *Socio-demographic data*

Socio-demographic data are reported in Table I. From the analysis of the socio-demographic and clinical characteristics of the sample in comparison with the recovery style there were no statistically significant differences. This fact allows us to perform non adjusted analysis and to feel confident that any significant differences observed are not affected by a different composition of the two groups for socio-demographic and clinical characteristics.

### *Recovery Style and symptoms*

The assessment performed though the filling-in of the ISOS by health workers revealed an overlap for almost all of the sample. Unlike in the previous study which involved the enrollment of inpatients and outpatient structures, where a prevalence of the integration style for females was observed (Vender et al. 2014), in this work the prevalence between the two styles was similar. Furthermore, the overall prevalence of the integration style was observed in the work cited, while the observation targeted to the day center showed an equal distribution of the two types of patients.

This element underlines the importance of being able to formulate therapeutic/rehabilitation programs that take into consideration the different characteristics of both groups of users.

From the analysis of the relationship between symptoms presented (frequency*severity), which correspond to the different items of the NPI, and the recovery style used, no statistically significant differences in the prevalence of symptoms between the two groups were showed. An exception is represented by nervousness, much more present in the sealers (40.9% *vs* 4.4%). Participation in therapeutic/rehabilitation activities can increase the inner tension of the mechanism of denial of the psychotic experience [8]. As we expected, depression was significantly more frequent in the group of integrator patients (100% vs 63.6%) (Table II).

### *Distress*

Figure 1 describes the distress reported by the mental health workers depending on the presence of symptoms in the two different recovery styles. Agitation and nervousness seem to determine a high degree of distress. These symptoms characterize clinical situations of excessive stimulation resulting in an increase of the demand for professional intervention by the mental health workers. Moreover, these symptoms destabilize the emotional climate of the group and represent an exception to the daily program of rehabilitation activities planned with patients. Considering the analysis of the degree of distress related to the recovery style, statistically significant differences were not observed.

In Table III we can find the correlation according to Spearman between distress and symptoms presented (frequency*severity) in both groups of patients and on the total of the sample. We can also find the value of interaction test between severity and recovery style. A significant value indicates that the recovery style for that particular symptom acts as a modifier of the effect on distress.

The Spearman test shows a statistical significance of

**Table II.** Proportion of subjects with symptoms, appraisal between the recovery style group.

| | Integration (N = 23) n (%) | Sealing Over (N = 22) n (%) | Test* | p-value |
|---|---|---|---|---|
| Delusions | 10 (43.5) | 11 (50.0) | 0.19 | 0.66 |
| Hallucinations | 14 (60.9) | 12 (54.6) | 0.18 | 0.67 |
| Agitation | 9 (39.1) | 10 (45.5) | 0.18 | 0.67 |
| Depression | 23 (100.0) | 14 (63.6) | 10.2 | 0.001 |
| Euphoria | 8 (34.8) | 5 (22.7) | 0.80 | 0.37 |
| Aphaty | 12 (52.2) | 12 (54.6) | 0.03 | 0.87 |
| Anxiety | 19 (82.6) | 13 (59.1) | 3.03 | 0.08 |
| Uninhibition | 4 (17.4) | 4 (18.2) | 0.005 | 0.94 |
| Nervousness | 1 (4.4) | 9 (40.9) | 8.7 | 0.003 |
| Aberrant motor activity | 4 (17.4) | 5 (22.7) | 0.20 | 0.65 |
| Eating disorders | 6 (26.1) | 5 (22.7) | 0.07 | 0.79 |

** Chi-square (1 df). Fisher exact p-value was reported for depression, uninhibition, nervousness and aberrant motor activity.*

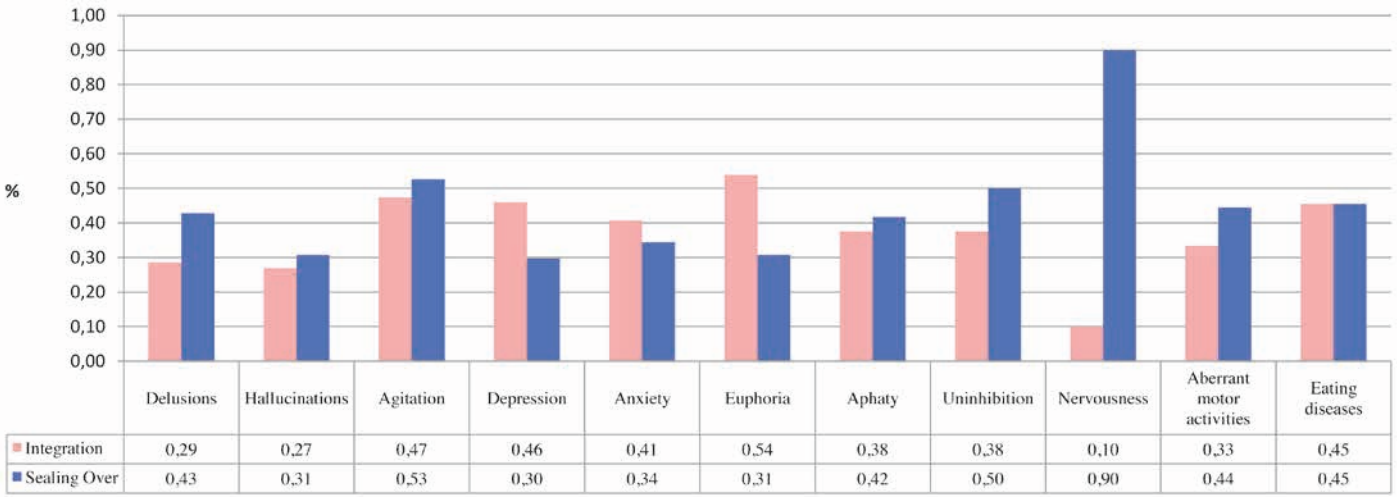


FIGURE 1.
Correlation between distress in the mental health workers and recovery style.

**Table III.** Correlation between NPI symptoms and distress, differences between recovery style groups.

| | N | Overall | Integration | Sealing Over | p-value* |
|---|---|---|---|---|---|
| Delusions | 21 | 0.29 | 0.09 | 0.68 | 0.18 |
| Hallucinations | 26 | 0.19 | 0.30 | 0.29 | 0.72 |
| Agitation | 19 | 0.17 | -0.10 | 0.54 | 0.16 |
| Depression | 37 | 0.32 | 0.01 | 0.76 | 0.01 |
| Euphoria | 13 | 0.01 | -0.06 | 0.00 | 0.84 |
| Aphaty | 24 | 0.51 | 0.40 | 0.64 | 0.08 |
| Anxiety | 32 | 0.06 | -0.27 | 0.43 | 0.004 |
| Uninhibition | 8 | 0.86 | 0.82 | 0.82 | 0.49 |
| Nervousness | 10 | 0.56 | ne§ | 0.43 | ne |
| Aberrant motor activity | 9 | 0.27 | 0.82 | -0.18 | 0.38 |
| Eating disorders | 11 | 0.38 | 0.57 | 0.18 | 0.82 |

** p-value referred to interaction between recovery style and severity in a regression model. § Only 1 patient in this category. ne: not estimable*

the un-inhibition, on the total of the sample (rho = 0.86, p-value = 0.01). Therefore, it can be considered in an independent way from the recovery style (p-value interaction term = 0.49). As far as nervousness and apathy are concerned, a high correlation was found ($\rho > 0.50$), although not significant. With reference to the recovery style, statistically significant differences were found for depression and anxiety, bearing a greater degree of distress in the management of sealer patients (interaction p-value 0.01 and 0.004, respectively).

These patients can bring the different therapeutic/rehabilitative proposals as bearing excessive inner tension in the mechanism of denial of the psychotic experience. For this reason, symptoms such as anxiety and depression acquire clinical expression that determines a greater degree of tension and psychological stress in mental health professionals.

## Discussion and Conclusions

In our sample, equitably represented by integrators and sealers, a significant difference between the recovery style groups for the proportion of subjects with depression and nervousness was observed (p<. 001 and <. 003). Focusing on depression, Drayton found that patients in the sealing over group made significantly more negative self-evaluation than did those in the integration group [9]. Consistent with our findings, Muser found that integrators showed higher levels of depression than sealers [10]. Other authors suggested that a sealing over approach to illness may be a valid and successful coping style for those who adopt it and

that poor insight serves as a protector of self-esteem [11]. Dealing with distress in mental health professionals, symptoms causing a greater distress, in an absolute sense, are uninhibition, nervousness and apathy. These aspects, both for the excess and for the lack of the stimuli caused in the mental health workers, are the least tolerated in the therapeutic relationship. An interesting correlation between depression in sealers and distress of caregivers was observed, although this symptom was more frequently detected in the integrators. It can be assumed that the sealers evoke a greater distress in the mental health professionals because they are less adherent to treatment program [12 13]. The end points were achieved. The limits of the study are the small size of the sample and the lack of an evaluation of insight, closely related to the construct of recovery style. We are engaged in research to deepen this point, with these goals in mind.

***Acknowledgments and financial support***

The authors declare that received no specific funding for this work. They declare that no competing interests exist. Acknowledgments: none.

## Take home messages for psychiatric care

- Severity is the high presence of the symptoms, the burden is the degree of distress reported by the health professionals in the management of severe patients
- In regard to the recovery style, depression and anxiety cause a greater degree of distress in sealer patients
- The symptoms which cause a greater distress in the health professionals are uninhibition, nervoussess and apathy
- These symptoms are more burdensome for mental health professionals, because they require a greater engagement in the therapeutic relationship
- Further studies are required to depeen an evaluation of insight

### References

1 McGlashan TH, Levy ST 1997. *Sealing over in a therapeutic community.* Psychiatry 1997;40:55-65.
2 Tait L, Birchwood M, Trower P. *Predicting engagement with services for psychosis: insight, symptoms and recovery style*. Br J Psychiatry 2003;182:123-8.
3 World Health Organization The ICD-10 classification of mental and behavioural disorders: diagnostic criteria for research World Health Organization: Geneva 1992.
4 Vender S, Poloni N, Aletti F, et al. *Service engagement: psychopathology, recovery style and treatments*. Psychiatry J 2014;2014:249852.
5 Baranzini F, Grecchi F, Berto E, et al. *Factor analysis and psychometric properties of the Italian version of the Neuropsychiatric Inventory-Nursing Home in an institutionalized elderly population with psychiatric comorbidity*. Rivista di Psichiatria 2013;48:335-44.
6 Berto E, Caselli I, Bonalumi C, et al. *Gravità e gravosità: studio nel contesto dei centri diurni dell'Azienda Ospedaliera di Varese*. Psichiatria Oggi 2014;XXVII:1-2.
7 Poloni N. Callegari C, Buzzi A, et al. *The Italian version of ISOS and RSQ, two suitable scales for investigating recovery style from psychosis*. Epidemiol Psichiatr Soc 2010;19:352-9.
8 Correale A, Nicoletti V. *Il gruppo in psichiatria: sei seminari per educatori e infermieri professionali*. Roma: Borla 2004.
9 Drayton M, Birchwood M, Trower P. *Early attachment experience and recovery from psychosis. Br* J Clin Psychol 1998;37:269-84.
10 Muser KT, Corrigan PW, Hilton DW, et al. *Illness management and recovery: a review of the research*. Psychiatr Serv 2002;53:1272-84.
11 Carroll A, Pantelis C, Harvey C. *Insight and hopelessness in forensic patients with schizophrenia*. Aust N Z J Psychiatry 2004;38:169-73.
12 Jackson H, McGorry P, Henry L. *Cognitively oriented psychotherapy for early psychosis (COPE): a 1 year follow up*. Br J Clin Psychol 2001;67:57-70.
13 Startup M, Wilding N, Startup S. *Patients treatment adherence in cognitive behavioural therapy for acute psychosis: the role of recovery style and working alliance.* Behavioural and Cognitive Psychotherapy 2003;34:191-9.